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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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David Chatenever

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EXAMINER

HENN, TIMOTHY J

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/034,273	Applicant(s) CHATENEVER ET AL.	
	Examiner Timothy J. Henn	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6 and 8-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6 and 8-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____. | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) <input type="checkbox"/> Notice of Informal Patent Application
6) <input type="checkbox"/> Other: _____. |
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DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 27 February 2008 have been fully considered but they are not persuasive. Applicant argues that Mochida in view of Nakamura does not disclose a "software program". However, it is noted that The IEEE Standard Dictionary of Electrical and Electronics Terms, Sixth Edition defines "software" on page 1006 to be "Computer programs, procedures, and associated documentation and data pertaining to the operation of a computer system". The examiner notes that the circuit data of Nakamura meets at the very least the "data" section of this definition and further submits that it would meet the "procedures" section since the data describes the image processing procedure which is performed by the configurable device once configured. The examiner further notes that Nakamura discloses that the circuit data (i.e. "software program") can be stored remotely from the camera control unit (e.g. in data ROMs 19 and 20).

Applicant further argues that Mochida does not disclose a detachable configurable component including a processor as claimed. However, Mochida the detachable configurable component of Mochida is not limited solely to the FPGA as argued by Applicant. Instead, the detachable configurable component includes multiple circuits (e.g. Figure 28). The FPGA of the detachable configurable component receives programming data and is reconfigured, thereby configuring the detachable configurable component to process data in different manners as described by Mochida in view of Nakamura (i.e. the state of the FPGA on the detachable component determines how the

component will process the image data). Since the claims as written are not specific as how the software program and processor configures the detachable configurable component it is believed that Mochida in view of Nakamura meets the limitations as claimed.

Regarding the Steinberg reference Applicant argues that the communication device 10 is not “in the camera control unit” and the camera is never simultaneously connected to the communication device 10 and PC 14. The examiner notes that the claim as written does not require that the detachable configurable device be physically inside the control unit and further notes that the device 10 is connected to PC 14 or destination 18 as a system, and can therefore be considered as being within the camera control unit system. It is further noted that the claim does not define that the camera is in simultaneous communication with both the detachable configurable device and the camera control unit and that even if the claim did recite such a limitation, the detachable device 10 can be considered to be part of the camera control unit system (i.e. since the device 10 is part of the control unit system, communicating with the device 10 would be the same as communicating with a portion of the control unit system). In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant further argues that the device 10 does not process the image data as claimed. However, Steinberg explicitly discloses image processing functions which maybe performed on the received image data such as compression, color correction, etc. (see Figure 8).

Therefore Applicants arguments with respect to Mochida, Nakamura and Steinberg are not considered persuasive and the rejections based on these references will be repeated below.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1-4, 6 and 8-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mochida et al. (US 2004/0141054) in view of Nakamura et al. (US 5,627,583).

[claim 1]

Regarding claim 1, Mochida discloses a video imaging system (Figure 1), comprising: a camera head for transmitting image data (Figure 1, Item 3; Paragraph 0136); a camera control unit receiving and processing the image data from the camera head (Figure 1, Item 4; Paragraph 0136), the camera control unit having a detachable configurable component (Figure 1, Items 41-43; Paragraphs 0227-0239; Mochida discloses an expansion substrate which uses an FPGA to process image data) including a processor (FPGA is a "processor"), wherein the detachable configurable

component is completely removable from the camera control unit such that a different detachable configurable component may be installed in the camera control unit (e.g. Paragraph 0028; "disconnected freely"; Paragraphs 0174-0177). Mochida further discloses that the detachable configurable component can be configured according to received information (e.g. Paragraphs 0235-0237) but does not explicitly disclose that the program is stored on a storage device accessible by the camera control unit.

Nakamura discloses a similar video imaging system (Figure 2) including a camera head (Figure 2, Item 1), camera control unit (Figure 2, Item 3) and a reconfigurable processing component (Figure 2, Item 16). Nakamura further discloses that information (i.e. a software program) stored on a storage device accessible to the camera control unit can be used to properly configure the reconfigurable processing component according to the type of camera head connected (e.g. c. 4, ll. 5-57). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to configure the reconfigurable processing components of Mochida in accordance with data stored on a storage device accessible to the camera control unit as taught by Nakamura to perform optimum processing on image data produced by the connected camera head (c. 4, ll. 52-57).

The received program of Mochida in view of Nakamura overwrites the previously stored program on the FPGA (i.e. reprograms the FPGA to perform a different function). The examiner notes that as broadly as claimed, the FPGA processor "configures the detachable component for processing image data", i.e. the current state of the FPGA determines what operations will be performed on incoming image data. The claim as

written does not explicitly state how the processor configures the detachable component, therefore, Mochida in view of Nakamura meets the claim limitations as written.

[claim 2]

Regarding claim 2, Nakamura further discloses that a camera head identifier can be sent to the camera control unit for retrieving the information from the storage device (Figure 6; c. 7, ll. 7-51).

[claim 3]

Regarding claim 3, Nakamura discloses a camera head which transmits the camera head identifier (Figure 6, Item 51, 52; c. 7, ll. 21-34; the examiner notes that since the camera head identifying means is located on the camera head, information must be “transmitted” as claimed to the camera control unit in some manner to inform the camera control unit of the identifier of the connected camera head).

[claim 4]

Regarding claim 4, Nakamura discloses a camera head which includes the storage device (Figure 2, Items 19, 20).

[claim 6]

Regarding claim 6, Nakamura discloses information for programming an FPGA to optimally process image data (c. 4, ll. 5-57). The examiner notes that, as broadly as claimed, this information can be said to “specify” the at least one replaceable hardware component (e.g. the information provides a specification for the FPGA by

which the image information is processed).

[claim 8]

Regarding claim 8, Mochida discloses a replaceable hardware component which further includes a memory device (Figure 28, Item 73).

[claim 9]

Regarding claim 9, Mochida discloses a replaceable hardware component which further includes a field programmable gate array (i.e. FPGA, Figure 28, Item 452; Paragraph 0229).

[claim 10]

Regarding claim 10, Mochida discloses a video bus and the replaceable hardware component attached to the video bus (Figure 1).

[claim 11]

Regarding claim 11, Mochida discloses a replaceable hardware component which includes a connector (Figure 2, Item 35; Paragraph 0145).

[claim 12]

Regarding claim 12, Mochida discloses a connector which receives image data (Paragraphs 0146-0147).

[claim 13]

Regarding claim 13, Mochida discloses a connector which outputs a signal processed from the image data (e.g. Paragraph 0143 discloses outputting to a monitor through D/A convert 36 and encoder 37 while Figure 23 and Paragraphs 0204-0226 disclose enlarging an image using the expansion substrates to display an enlarged

image on the monitor, therefore the connect must include an output as claimed to output processed image data).

[claim 14]

Regarding claim 14, Mochida discloses a camera control unit which further comprises hardware capable of processing at least two different types of image data (e.g. Paragraph 0194; image data from CCD sensors of varying sizes can be considered different "types" of image data).

[claim 15]

Regarding claim 15, Mochida discloses information which routes the image data received by the camera control unit to the hardware capable of processing specified type of image data (i.e. by programming the FPGA using the information, the image data is "routed" to a proper section of the FPGA which is capable of providing proper processing).

[claim 16]

Regarding claim 16, Nakamura discloses configuring a reconfigurable hardware component so that the camera control unit is capable of issuing commands to the camera head as claimed (c. 4, ll. 5-57).

[claim 17]

Regarding claim 17, Mochida discloses a video imaging system (Figure 1), comprising: a camera head for transmitting image data (Figure 1, Item 3; Paragraph 0136); a camera control unit receiving and processing the image data from the camera head (Figure 1, Item 4; Paragraph 0136), the camera control unit having a detachable

configurable component (Figure 1, Items 41-43; Paragraphs 0227-0239; Mochida discloses an expansion substrate which uses an FPGA to process image data) including a processor (FPGA is a "processor"), wherein the detachable configurable component is completely removable from the camera control unit such that a different detachable configurable component may be installed in the camera control unit (e.g. Paragraph 0028; "disconnected freely"; Paragraphs 0174-0177). Mochida further discloses that the detachable configurable component can be configured according to received information (e.g. Paragraphs 0235-0237), but does not explicitly disclose that the camera control unit receives the information and configures the component as claimed.

Nakamura discloses a similar video imaging system (Figure 2) including a camera head (Figure 2, Item 1), camera control unit (Figure 2, Item 3) and a reconfigurable processing component (Figure 2, Item 16). Nakamura further discloses that information received by the camera control unit can be used to configure a reconfigurable processing component (e.g. c. 4, ll. 5-57). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to configure the reconfigurable processing components of Mochida in accordance with data stored on a storage device accessible to the camera control unit as taught by Nakamura to perform optimum processing on image data produced by the connected camera head (c. 4, ll. 52-57).

The received program of Mochida in view of Nakamura overwrites the previously stored program on the FPGA (i.e. reprograms the FPGA to perform a different function).

The examiner notes that as broadly as claimed, the FPGA processor "configures the detachable component for processing image data", i.e. the current state of the FPGA determines what operations will be performed on incoming image data. The claim as written does not explicitly state how the processor configures the detachable component, therefore, Mochida in view of Nakamura meets the claim limitations as written.

[claim 18]

Regarding claim 18, Nakamura discloses a storage device accessible by the camera control unit (Figure 2, Items 19, 20).

[claim 19]

Regarding claim 19, Nakamura discloses information stored on the storage device (c. 4, ll. 5-57).

[claim 20]

Regarding claim 20, Mochida discloses a connector for outputting a signal processed from the image data (e.g. Figure 1, output of Item 37).

[claim 21]

Regarding claim 21, Mochida discloses a camera control unit which further comprises hardware capable of processing at least two different types of image data (e.g. Paragraph 0194; image data from CCD sensors of varying sizes can be considered different "types" of image data).

4. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steinberg et al. (US 6,750,902).

[claim 22]

Regarding claim 22, Steinberg discloses a video imaging system (Figure 1) comprising a camera head transmitting image data (Figure 1, Item 12); a camera control unit receiving and processing the image data from the camera head (Figure 1, Item 14 or 18; c. 4, l. 48 - c. 5, l. 4); said camera control unit having a detachable configurable component comprising a processor (Figure 1, Item 10; note that the device 10 is at least connected via network link 38; Figure 3, Item 66); a software program (note that the program of Steinberg at least meets the definition provided above; e.g. procedures and data pertaining to the operation of the device) executing on the processor and overwriting an existing program on the processor, the processor configuring the detachable configurable component in the camera control unit to process the image data (c. 4, ll. 26-41; c. 5, ll. 18-30; c. 6, l. 44-48; note that the programming of the processor determines what operations will be applied to incoming image data); wherein the detachable configurable component is completely removable from the camera control unit such that a different detachable configurable component is installable in the camera control unit (Figure 1 and Figure 13; note that multiple different detachable components 220-224 may interface with the camera control unit 226; also note that the detachable component is not disclosed as being permanently connected to the camera control unit).

[claim 23]

Regarding claim 23, Steinberg discloses obtaining a programming instructions from a storage device (Figure 1, Item 36; c. 4, ll. 26-41). Since the storage device is accessible to the detachable component, and the detachable component communicates with the camera control unit, the storage device must be "accessible" to the camera control unit for at least the reason that data from the storage device could be communicated to the camera control unit via the detachable component.

[claim 24]

Regarding claim 24, Steinberg discloses a program for configuring the processor stored on the storage device (Figure 1, Item 36; c. 4, ll. 26-41).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

i. Cheung

US 5,584,292

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Henn whose telephone number is (571)272-7310. The examiner can normally be reached on M-F 11-7.

7. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lin Ye/

Supervisory Patent Examiner, Art Unit 2622